

10. A system in accordance with claim 1, wherein the processor is configured to form:

a background information plot with the extended duration R-R interval plot comprising one or more of activity amount, activity intensity, posture, syncope impulse detection, respiratory rate, blood pressure, oxygen saturation (SpO₂), blood carbon dioxide level (pCO₂), glucose, lung wetness, and temperature; and

background information layered to or keyed with the extended duration R-R interval plot comprising one or more of activity amount, activity intensity, posture, syncope impulse detection, respiratory rate, blood pressure, oxygen saturation (SpO₂), blood carbon dioxide level (pCO₂), glucose, lung wetness, and temperature.

11. A method for facilitating diagnosis of cardiac rhythm disorders with the aid of a digital computer, comprising the steps of:

monitoring and recording cutaneous action potentials of a patient;

retrieving the cutaneous action potentials as electrocardiogram (ECG) data for a set time period and identifying a plurality of R-wave peaks in the ECG data;

calculating a difference between recording times of successive pairs of the R-wave peaks and determining a heart rate associated with each time difference;

forming an extended duration R-R interval plot over the set time period comprising each of the recording time differences and the associated heart rates;

displaying the extended duration R-R interval plot and identifying a temporal point of reference in the extended duration R-R interval plot; and

displaying at least part of the ECG data preceding and following the temporal point of reference as context in at least one accompanying ECG plot.

12. A method in accordance with claim 11, further comprising at least one of the steps of:

presenting the at least one accompanying ECG plot as a ECG view produced at a traditional paper-based ECG recording speed; and

presenting the at least one accompanying ECG plot as a lower resolution, pre- and post-event contextual view relative to the temporal point of reference.

13. A method in accordance with claim 11, further comprising at least one of the steps of:

limiting the heart rates to a range outside of which the time differences and the associated heart rates are excluded from the extended duration R-R interval plot; and

constructing the extended duration R-R interval plot with a non-linear scale for the heart rates.

14. A method in accordance with claim 13, wherein the non-linear scale for the heart rates is determined in accordance with the equation:

$$y = \left(\frac{x - \text{min bpm}}{\text{max bpm} - \text{min bpm}} \right)^n$$

where x is the time difference, min bpm is the minimum heart rate (in beats per minute), max bpm is the maximum heart rate, and n<1.

15. A method in accordance with claim 11, further comprising the step of:

recording the cutaneous action potentials through an ambulatory ECG monitor disposed for wear on the patient's chest along the sternum, the ambulatory ECG monitor adapted to be interfaced to a pair of cutaneous electrodes adhered to the patient's skin along the sternal midline.

16. A method in accordance with claim 11, further comprising the steps of:

identifying a potentially-actionable cardiac event within the ECG data; and

selecting the plurality of R-wave peaks from the ECG data prior to and after the potentially-actionable cardiac event.

17. A method in accordance with claim 11, further comprising the step of:

forming a diagnosis based on heart rate variability patterns identified in the extended duration R-R interval plot.

18. A method in accordance with claim 17, further comprising the steps of:

detecting atrial fibrillation by identifying a Gaussian-type distribution of heart rate variability in the extended duration R-R interval plot.

19. A method in accordance with claim 18, further comprising the step of:

programming a therapy in response to the diagnosis into a cardiac rhythm therapy delivery device.

20. A method in accordance with claim 11, further comprising at least one of the steps of:

including a background information plot with the extended duration R-R interval plot comprising one or more of activity amount, activity intensity, posture, syncope impulse detection, respiratory rate, blood pressure, oxygen saturation (SpO₂), blood carbon dioxide level (pCO₂), glucose, lung wetness, and temperature; and

layering or keying background information with the extended duration R-R interval plot comprising one or more of activity amount, activity intensity, posture, syncope impulse detection, respiratory rate, blood pressure, oxygen saturation (SpO₂), blood carbon dioxide level (pCO₂), glucose, lung wetness, and temperature.

21. A non-transitory computer readable storage medium storing code for executing on a computer system to perform the method according to claim 11.

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